circuit 12. As a consequence, the sensor 14 can be operated independently of the exemplary integrated circuit 12 and therefore used to determine a base line temperature of the exemplary integrated circuit 12 for calibration purposes. In this manner, the sensor 14 can be calibrated without having to compensate for the thermal affects of having one or more other active elements within the exemplary integrated circuit 12 active during baselining.

a2

The input node 18 is adapted to receive a digital input signal that triggers the sensor 14 to sense a physical stimulus and report a response corresponding to an absolute or relative value of the physical stimulus. The output node 16 is adapted to communicate a digital signal that includes at least three values to indicate that the sensor 14 is in process of sensing a physical stimulus, the response held by the register 15 along with a data value that indicates whether the sensor 14 is functioning correctly. The operation of the input node 18 and the output node 16 are discussed in more detail with reference to Figures 2 and 3.

Those of ordinary skill in the art will recognize that power input node 22 and the clock input node 24 can also be coupled to a common clock node and a common power node within the integrated circuit 12 should a baseline temperature measurement with all operating elements in an off state not be necessary. The ground node 20 typically shares a common ground plane with the exemplary integrated circuit 12. Moreover, those skilled in the art will recognize that the input node 18 and the output node 16 can be

adapted to provide the sensor 14 with an interface internal to the exemplary integrated circuit 12.

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a2

Figure 2 is a waveform diagram that illustrates the digital signals communicated to the input node 18 and from the output node 16. The input signal 30 asserted on the input node 18 acts as a reset signal to reset the sensor 14 and initiate a sensing operation by the sensor 14. The output signal 32 communicated from the output node 16 is a digital signal that toggles between a logic "0" level and a logic "1" level to communicate the first value, the second value and the third value of the sensor 14 in serial fashion. Figure 3 illustrates the steps taken by the sensor 14 to report a sensed physical stimulus. Upon power up of the sensor 14, the state of the sensor is unknown. As such, the input signal 30 is held asserted to a logic level "0" at the input node 18 to force the sensor 14 to its initial or starting state. By forcing the sensor 14 to its starting state the content of the register 15 is reset. The sensor 14 remains in this state until the input signal 30 asserted at the input node 18 rises to a logic "1" level following at least one clock cycle of the clock signal asserted on the clock input node 24. Those skilled in the art will recognize that sensor 14 can be configured so that when the input signal 30 is asserted to a logic "1" level at the input node 18 to force the sensor 14 to its initial or starting state. Moreover, those skilled in the art will recognize that the input signal 30 can be asserted to a logic "0" level at any time after the power on reset to again force the sensor 14 to its initial or starting state.

Please amend page 8, paragraph 3 to page 9 paragraph 1 as follows:

a3

After one clock cycle on the clock input node 24, the sensor 14 shifts the measured value of the physical stimulus out of the register 15 on the output node 16 at a